

Recruitment & Retention of Women and Minorities into Clinical Research

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Goals

1. What investigators need to know about NIH rules on inclusion of women and minorities in NIH clinical research
2. Barriers to inclusion of women and minorities into clinical research
3. A useful framework for addressing specific barriers to inclusion of women and minorities into clinical research

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Overview

- **Review and Rationale of Policy**
- **Recent Up-Dates & Implications**
 - **Definition of Clinical Research**
 - **OMB Standards**
 - **NIH-Defined Phase III Trials**
- **Resources and Getting Help**

NIH Policy on Inclusion of Women & Minorities in Clinical Research

- **Why does NIH have this policy?**
 - **Mandated by Congress, 1993 PL 103-43**
 - **Ethical principal of justice and importance of balancing research burdens and benefits**

Just and equitable distribution of risks and benefits

- The principle of distributive justice implies the use of a recruitment method that distributes the benefits and risks of research participation fairly throughout a population.
- Subjects should also be selected in a way that risks are minimized and the benefits or value of the information are maximized for individual subjects and society.

Public Law PL 103-43

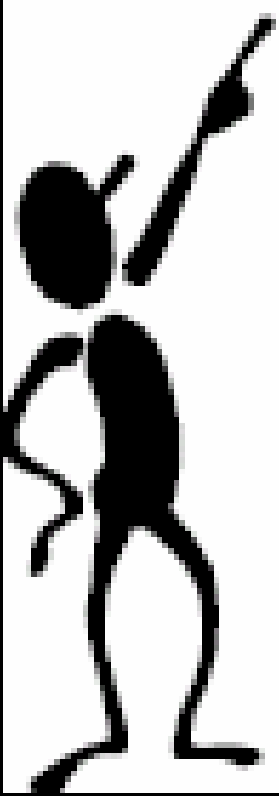
- Women and Minorities must be included in all clinical research studies
- Women and Minorities must be included in Phase III clinical trials in numbers adequate for valid analysis
- Cost is NOT allowed as an acceptable reason for exclusion
- NIH to support outreach efforts to recruit and retain women, minorities, and their subpopulations in clinical studies

NIH Policy on Inclusion

- **NIH Policy and Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research – Amended October, 2001**
- **http://grants1.nih.gov/grants/funding/women_min/guidelines_amended_10_2001.htm**

Updates to Inclusion Policy

- **NIH Definition of Clinical Research**
- **New OMB Standards for Data on Ethnicity and Race**
- **Further Clarification about NIH-Defined Phase III Clinical Trials**



NIH Definition of Clinical Research

(1) Patient-oriented research.

- Research conducted with human subjects (or on material of human origin such as tissues, specimens and cognitive phenomena) for which an investigator (or colleague) directly interacts with human subjects. Excluded from this definition are in vitro studies that utilize human tissues that cannot be linked to a living individual. Patient-oriented research includes: (a) mechanisms of human disease, (b) therapeutic interventions, (c) clinical trials, and (d) development of new technologies;

NIH Definition of Clinical Research (continued)

- (2) Epidemiologic and behavioral studies;
- (3) Outcomes research and health services research.

Update to NIH Policy for Inclusion

- **New OMB Standards**
- **OMB Directive 15 Issued 1997**
 - **Racial and Ethnic Standards for Federal Statistics and Administrative Reporting**
 - **Effective Date No Later Than January 1, 2003**

Update to NIH Policy for Inclusion

- **OMB Directive 15 Issued 1997**
 - **Collecting Data by Self-Report:**
 - **Two Separate Questions**
 - Question 1: Ask about Ethnicity
 - Question 2: Ask about Race WITH OPTION to select more than one racial designation

NIH Policy for Inclusion

- OMB Directive 15 Issued 1997
 - Ethnic Categories:
 - Hispanic or Latino
 - Not Hispanic or Latino
 - Racial Categories:
 - American Indian or Alaska Native
 - Asian
 - Black or African American
 - Native Hawaiian or Other Pacific Islander
 - White

Personal Data Form PHS 398: Examples

ETHNICITY

1. Do you consider yourself to be Hispanic or Latino? (See definition below.) Select one.

Hispanic or Latino. A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."

- ☐ Hispanic or Latino
- ☐ Not Hispanic or Latino

RACE

2. What race do you consider yourself to be? Select one or more of the following.

- ☐ American Indian or Alaska Native. A person having origin in any of the original peoples of North, Central, or South America, and who maintains tribal affiliation or community attachment.
 - ☐ Asian. A person having origin in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. (Note: Individuals from the Philippine Islands have been recorded as Pacific Islander in previous data collection strategies.)
 - ☐ Black or African American. A person having origin in any of the black racial groups of Africa. Terms such as "Negro" or "Negro" can be used in addition to "Black" or African American.
 - ☐ Native Hawaiian or Other Pacific Islander. A person having origin in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
 - ☐ White. A person having origin in any of the original peoples of Europe, the Middle East, or North Africa.
 - ☐ Check here if you do not wish to provide some or all of the above information.
-

Targeted/Planned Enrollment Table

This report format should NOT be used for data collection from study participants.

Study Title:

Total Planned Enrollment:

TARGETED/PLANNED ENROLLMENT: Number of Subjects			
Ethnic Category	Sex/Gender		
	Female	Male	Total
Hispanic/Latino			
Not Hispanic/Latino			
Ethnic Category Total (of # Categories)			
Racial Categories			
American Indian/Alaska Native			
Asian			
Black or African American			
Native Hawaiian or Other Pacific Islander			
White			
Racial Category Total (of # Categories)			

The "Ethnic Category Total (of # Subjects)" must be equal to the "Racial Categories Total (of # Subjects).

Update to NIH Inclusion Policy

- **NIH-Defined Phase III Clinical Trials**
 - Evidence must be reviewed to show whether clinically important sex/gender and race/ethnicity differences in intervention effect are expected
 - Plans for valid analysis must be included in the design
 - Results of analyses must be reported to NIH

Requirements for NIH-Defined Phase III Clinical Trials

- **Research plan must include one of the following:**
 - Prior studies support significant differences between subgroups:
 - Need plans to conduct valid analyses to detect significant differences between sex/gender and/or racial/ethnic subgroups
- For the purpose of this policy, Significant Difference is defined as a difference that is of clinical or public health importance based on substantial scientific data. This is not the same as "statistically significant difference."

Requirements for NIH- Defined Phase III Clinical Trial Applications

OR:

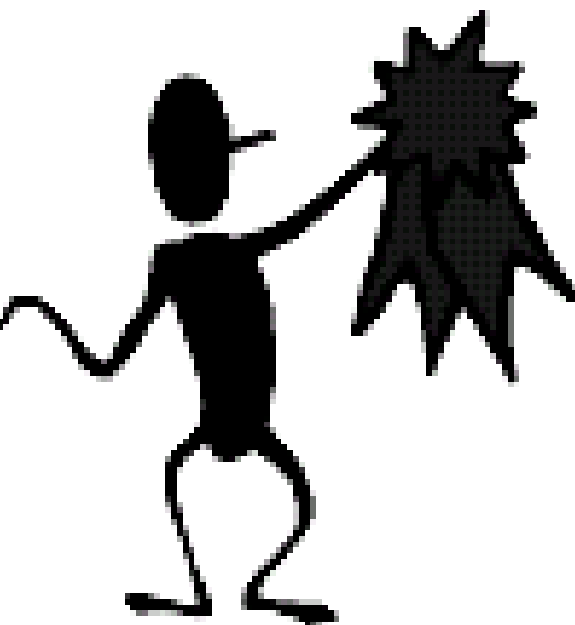
- Prior studies support no significant differences between subgroups:**
 - + Representation as subject selection criterion is not required; however, inclusion and analyses are encouraged**

Requirements for NIH- Defined Phase III Clinical Trial Applications

OR:

- Prior studies neither support nor negate significant differences in intervention effect between subgroups:
- Plans to conduct valid analyses of the intervention effect in sex/gender and/or racial/ethnic subgroups (Does not require high statistical power)
 - For the purpose of this policy, Valid Analysis means an unbiased assessment that does not require high statistical power and should be conducted for both large and small studies.

Instructions in PHS 398



- Best source of information for investigators
- <http://grants1.nih.gov/grants/funding/phs398/phs398.html>

Instructions in PHS 398

- **Section E: Human Subjects Research**
 - └ Inclusion of Women
 - └ Inclusion of Minorities
- **Failure to include = Return Application Prior to Review**



Instructions in PHS 398

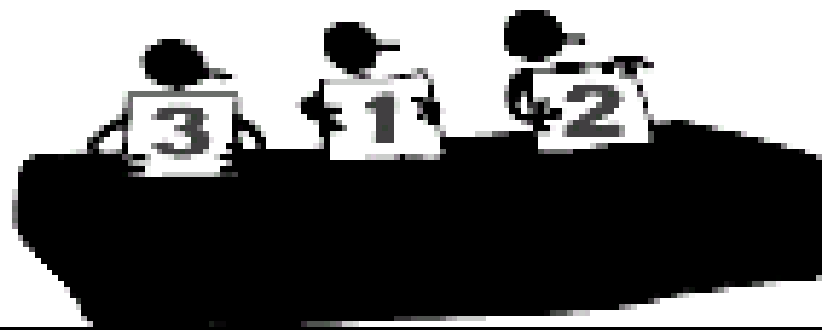
- **Inclusion of Women and Minorities**
Sections must include:
 - **Subject Selection Criteria & Rationale**
 - **Rationale for Any Exclusions**
 - **Enrollment dates (start and end)**
 - **Outreach Plans for Recruitment**
 - **Proposed Composition Using New Tables**

Reviewer Instructions

- Reviewers evaluate the **Inclusion Plans**

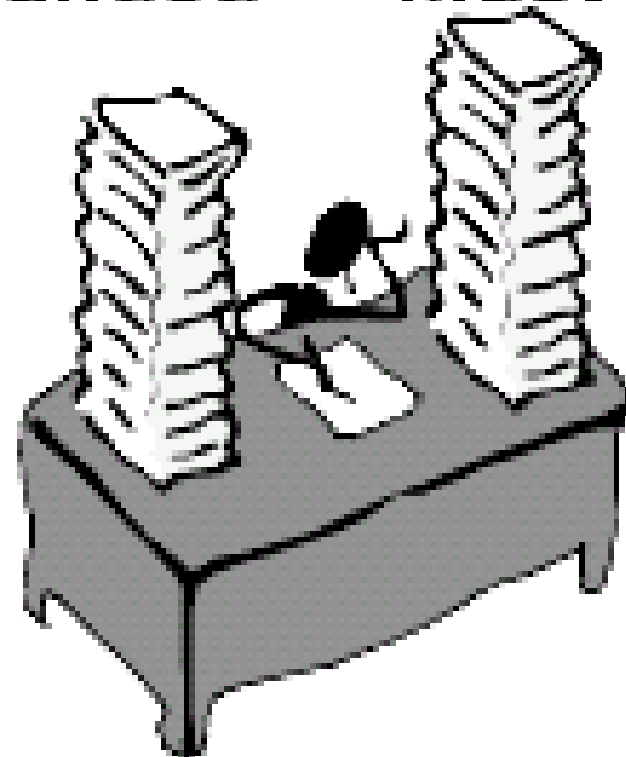
http://grants1/nih.gov/grants/peer/hs_review_inst.pdf

- **Unacceptable plans must be reflected in the priority score**



Funding Decisions

- **Applications with Unacceptable Plans cannot be funded – must revise plans!**

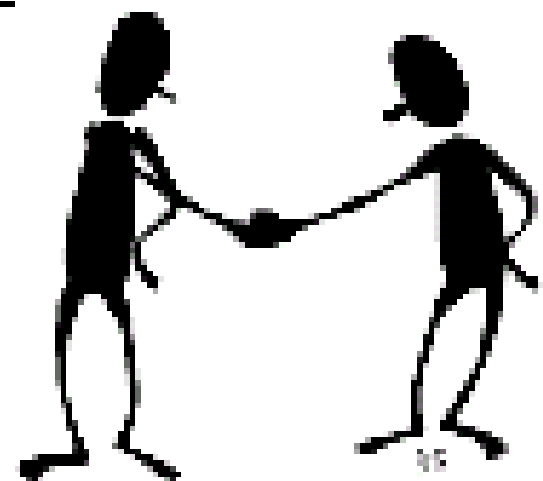


Resources and Getting Help

- Inclusion of Women and Minorities – Implementation Page

http://grants1.nih.gov/grants/funding/women_min/women_min.htm

- CONTACT PROGRAM STAFF!

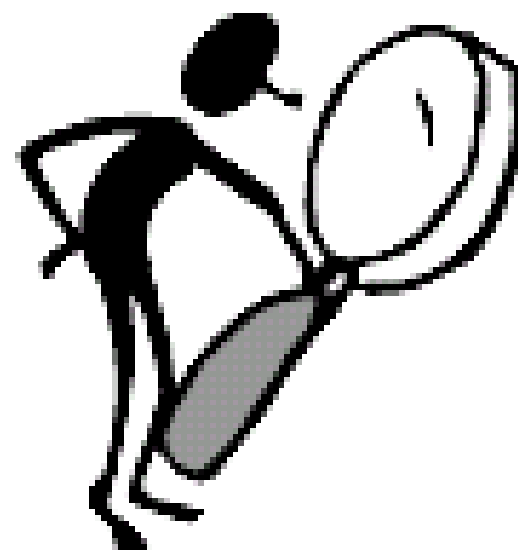


Requirements for NIH- Defined Phase III Clinical Trial Applications

- **Progress Reports need to include**

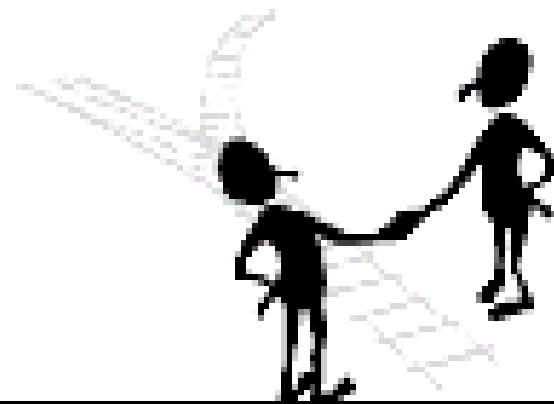
Both:

- **Enrollment Table**
- **Statement in text about progress in data analyses for sex/gender and ethnicity/racial effects.**



Complying with the NIH Inclusion Policy

- Principal Investigators
- Review Staff and Reviewers
- Program Staff
- Grants Management Staff
- NIH Tracking and Inclusion Committee
- Congress
- Public



Monitoring Compliance with the NIH Inclusion Policy

**2001 Biennial Report: Monitoring
Adherence to the NIH Policy on
the Inclusion of Women and
Minorities as Subjects in Clinical
Research**

<http://www4.od.nih.gov/orwh/salmonrpt.pdf>

Resources and Getting Help

- **PHS 398 Instructions**

[http://grants1.nih.gov/grants/funding/p
hs398/phs398.html](http://grants1.nih.gov/grants/funding/p
hs398/phs398.html)

- **PHS 2590 Instructions**

[http://grants1.nih.gov/grants/funding/2
590/2590.htm](http://grants1.nih.gov/grants/funding/2
590/2590.htm)

Possible goals of minority inclusion in research

- There are at least three goals that might be achieved by including minorities in research:
 1. To test specific hypotheses about differences (e.g., prognosis or treatment outcomes) by race and ethnicity.
 2. To generate hypotheses about possible differences by race and ethnicity when such differences are unknown.
 3. A third goal concerns the just distribution of benefits and risks of participation in research, which can be reached regardless of whether there are expected differences in outcome by race or ethnicity.

National Institutes of Health. Monitoring adherence to the NIH policy on the inclusion of women and minorities as subjects in clinical research. 2001. Available at: <http://www4.od.nih.gov/orwh/salmonrpt.pdf>; Woolson R et al: *Control Clin Trials*. 1995; 16: 301-303.

Table. Possible Goals of Minority Inclusion in Research

Goal (Reference)	Importance	How the Goal Might Be Achieved
To test hypotheses about possible differences by race or ethnicity (5,7)	Differences by race/ethnicity are suspected based on prior research, and need to be assessed formally	Differences by race/ethnicity as the primary or secondary research hypothesis in a study with adequate statistical power
To generate hypotheses about possible differences by race or ethnicity (5,7)	Scientific evidence not adequate to demonstrate whether differences by race/ethnicity are present or absent	Exploratory analyses to generate hypotheses
To ensure just and equitable distribution of risks and benefits of participation in research (16)	Benefits and risks of research participation should be fairly distributed in a population	Selection of subjects in a manner so results can be generalized to affected populations

Just and equitable distribution of risks and benefits

- The key question here is “To whom will these results be applied and is the population represented in such a way that the results can be generalized?”
- Several approaches are possible, but three are particularly applicable to research study samples.
 - Burden of disease
 - Use of census data or national estimates of disease
 - Use of local demographic characteristics

Weijer C, Crouch R. Why should we include women and minorities in randomized controlled trials? *J Clin Ethics*. 1999;10:100–106.

Emanuel E, Wendler D, Grady C. What makes clinical research ethical? *JAMA*. 2000;283:2701–2711.

Burden of disease in a population

- The burden of disease in a population is used to guide minority inclusion.
- This approach assumes that if a group has a higher likelihood of disease, they should have greater representation in research and a greater likelihood of sharing in the benefits and burdens of research.
 - For example, in designing a clinical trial to examine the effect of an intervention to reduce the complications of diabetes, the study sample would need to reflect the burden of diabetes in the general population; thus, groups with higher rates of diabetes, such as African Americans, Native Americans, and Hispanics, would have proportionally higher representation.

Use of census data or national estimates

- Use census data or other national estimates to guide the proportion of minorities included in research studies.
- This approach assumes that the probability of incurring the risks and benefits in research participation is proportional to a group's representation in the country, that is, there are no racial or ethnic differences in prevalence or outcomes.

Use of local demographic characteristics

- This approach requires study samples to reflect the demographic characteristics of a region, as opposed to the country.
- In studies that draw from a single geographic area with a high proportion of minority residents, it might be more appropriate for the study to enroll subjects in proportions that reflect the demographic makeup of the surrounding area.

Possible goals of minority inclusion in research

- The strategy used to determine the appropriate representation of minorities in any study should be dictated by the research hypothesis, study design, populations affected by the condition under investigation, and the state of existing knowledge about the problem being addressed.
- However, to achieve the broader aim of advancing scientific knowledge about the health of minority populations, investigators should be expected to state which goal they have selected, and why that goal is appropriate as compared with other possible goals.

Giselle Corbie-Smith et al; Am J Med. 2004;116:249 –252.

Goals

1. What investigators need to know about NIH rules on inclusion of women and minorities in NIH clinical research
2. Barriers to inclusion of women and minorities into clinical research
3. A useful framework for addressing specific barriers to inclusion of women and minorities into clinical research

Barriers to recruitment & retention of women and minorities

- The NIH continues to ensure the recruitment and retention of women and minorities as participants in clinical research^a
- Appropriate representation of women and minorities in biomedical and bio-behavioral research, especially clinical trials is an explicit criterion in the review of applications for NIH funding^b

^aPublic Law 103-43, 1993; ^bHarden and McFarland, 2000.

Barriers to recruitment & retention of women and minorities

- Limited data are available on the participation of underrepresented groups in clinical research.
- The *overall* participation rate in clinical trials also is low, ranging from 3 to 20 percent of adults^a
- Recruitment and retention of subjects in clinical research is complex and fraught with many barriers and potential strategies

^aGiuliano et al., 2000; Swanson and Ward, 1995

Participant barriers

- Time off work
- Transportation costs
- Childcare/Care for an elderly relative
- Language differences
- Out-of-pocket expenses
- Not wanting to change current medical treatment or physicians
- Concerns about medication side-effects
- Limited health insurance reimbursement
- Mistrust of medical research
- Fear of stigma associated with a disorder/disease

Investigator barriers

- Lack of diversity on the research team
- Research teams lacking knowledge about the communities chosen for inclusion
- Ineffective guidance to study staff
- Recruitment based on convenience
- Ineffective informed consent processes
- Limited knowledge about methods to promote a study
- Limited knowledge of appropriate retention methods, etc.

Reasons why so few adults participate in clinical research

- Fear and distrust of the research enterprise
- Lack of knowledge
- Lack of transportation
- Interference with work and/or family responsibilities
- Subject burden as a result of participation in a clinical study
- Financial costs

NCI Cancer Clinical Trials et. al., 2001; Giuliano et al., 2001; Brown et al., 2000; Corbie-Smith et al., 1999; Shavers-Hornaday et al., 1997

Fear and distrust of the research enterprise

- Research was widely viewed as risky by patients and of most value to scientists from the 1940s to the 1970s^a
- Fear and distrust of the research enterprise are often associated with Nuremberg and Tuskegee experiences
 - In the former, 23 Nazi scientists were prosecuted for crimes against humanity, while in the latter, 400 low-literacy African American men were systematically denied treatment by a U.S. government agency for more than 30 years^{b-c}
- The belief remains strong in minority communities that participating in a clinical trial could actually worsen one's health status or serve to stigmatize one's minority group status^d

^aMcCarthy, 1994; ^bNuremberg Code, 1949; ^cJones, 1993; ^dCorbie-Smith et al., 2002

Lack of knowledge

- Lack of information that is usable by subjects and clinicians may diminish interest and participation in clinical research.
 - Failure to inform PCPs may be as significant a barrier as failure to inform participants, because even a well-informed subject may be powerless to persuade their PCP to refer them to clinical research studies.
- Another significant issue is lack of knowledge about informed consent procedures and protections.
 - For example, some would-be research participants believe that the informed consent document protects the research institution and its staff while abridging the rights of the individual research participant.

Lack of transportation

- When there is no car, and access to buses/taxis are difficult or unaffordable, the prospect of traveling for research purposes may represent a formidable obstacle:
 - For example, one would-be research participant decided that, at age 80, a bus voucher was insufficient incentive for participation when confronted with ice, snow and 34 degree temperatures
 - For many tribal groups in rural sections of the West and Midwest, lack of transportation may be the sole barrier to participation
- Potential research participants in underserved and rural areas require additional consideration (planning and money) to meet transportation needs.

Interference with work and/or family responsibilities

- For many women and minorities, work and family are closely tied, with their job been the sole link to health care, and loss of employment would mean exclusion or dropout from clinical research.
- Taking annual/sick leave to participate in research is in conflict with leave that is needed to care for an ill family member.
- Simple monetary incentives will not adequately address this barrier. As caregivers for dependent children, grandchildren, or aging parents, some women and minorities clearly have no free hours left in a typical work week.

Subject burden as a result of participation in a clinical study

- In the current effort to add biological; physiological or genetic variables to many studies and surveys, subjects are often burdened with repeated medical tests and trips to clinical research sites.
- It is incumbent on investigators to be sensitive to issues of physical pain, environmental discomforts, and the value of pleasant and encouraging staff.
- This is becoming a major criterion for most IRB committees in considering approvals of research protocols.

Financial costs

- Poverty can be a major barrier to research participation for women and men alike regardless of racial or ethnic background.
- Minority women and men, who tend to be overrepresented in low-income and poverty level strata, have little reserve for unpaid research costs.
- The cost of being away from work and family, as well as, insurance coverage or lack of coverage is a deterrent under these circumstances.

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Points to consider about recruitment and retention while preparing a clinical research study

1. Community engagement
2. Benefits to participation
3. Barriers to participation
4. Recruitment strategies
5. Retention Strategies
6. Diversity
7. Staffing issues
8. Multi-site nature of study

Examples of communities

- Potential participants and their family members
- Referring physicians
- Community-based organization directors
- State department of health directors
- Civic organizations
- Advocacy organizations
- Faith-based organizations
- Churches
- Community centers
- Health clinics
- Media

Community engagement

1. Have you identified the communities that you would like to engage?
2. What relationships have you established with communities in order to facilitate your study?
 - What relationships will you need to establish?
 - How will you maintain these relationships?
3. What strategies will you use to engage different communities before and during your study?
4. What efforts has your University/Research Institution made in the past to engage these communities?
 - Are there any ongoing collaborations/partnerships at your institution?

Suggestions for community involvement

- Develop community networks including a community advisory group to facilitate community entry.
- Establish a community-based research advisory board to facilitate the planning of your research project.
 - Work with an established board, if it already exists.
- Solicit the support of health care decision makers, community leaders, businesses, social service agencies, and organizations.

Suggestions for community involvement

- Solicit the support, participation and collaboration of women and minority community physicians who provide care for the desired population groups.
- Solicit the support and participation of ministers and ministerial alliance groups in recruiting and retaining study participants.
 - Minority-based Greek organizations may be helpful in gaining entry and trust of the community, especially in colleges.
- Develop plans to share study results in formats most useful to the different communities involved, including participants, their families, and referring

Suggestions for community involvement

- Dissemination of information will be facilitated if there is sufficient diversity within the community-based research advisory board.
- Develop promotional and educational materials designed to increase awareness in the community.
- Identify communication channels that are culturally sensitive and language appropriate.
- Utilize established Outreach Partnership Programs either through your university or responsible NIH arm.

Benefits of participation

- What are the benefits of enrolling in this research study from potential participants' perspective?
 - How will you determine these benefits?
- What will the participating communities receive in return for their involvement in the study?
- Does the study design include assessment/treatment strategies that are likely to foster enrollment and retention?

Suggestions

- Include women and minority participants in designing the research and preparing study materials to be sure they meet their needs and expectations and are culturally and linguistically sensitive.
- Recruit participants to plan social events and coordinate daily tasks associated with running a clinical research investigation.
- Create a participant advisory board to give feedback on forms used, recruitment activities, study procedures, etc.

Suggestions

- Work with communities through focus groups, interviews, and surveys to develop a list of benefits of participating in the research study.
- The list of benefits can be communicated to potential participants, and specific benefits can be emphasized when speaking to different audiences.
- When communicating with patients, you might emphasize that the study aims to improve our understanding of and treatments for a given disorder.

Suggestions

- When speaking to family members, you could explain that the study will not require a patient to change his/her current treatment program.
- Messages of altruism that convey the benefits of the research for future generations (e.g., .for your daughter's sake.) or staying healthy in order to be there for the family (e.g., .families need their fathers.) received positive responses from women and minorities.

Barriers to participation

1. Ask yourself the question: What are the barriers to participation in this trial?
2. How will you prepare to address each of these barriers?
3. Will all study costs be covered for the participant?
 - Is there a way to reduce any costs not covered?
4. Have you considered the language requirements and literacy of proposed participants?
5. Are you familiar with how English is used by different racial and ethnic groups?

Suggestions

- Create an FAQ sheet addressing potential concerns in order to clear up misconceptions.
- Prepare recruitment documents using the first language of the target populations, such as Spanish.
 - Take into consideration that the Spanish language differs between countries, thus translation must be performed by an individual who is familiar with the target community.
- Study materials should be tailored with consideration of subjects' cultural & demographic characteristics.
- Pictorial representation or use of videotape media might be useful illustration of the study.

Improve communication

- Inform participants about the study protocol, treatment, and implications through meetings, newsletters, health fairs or other regular updates.
- Acknowledge contributions in ways that are meaningful to patients such as certificates of appreciation, cards on birthdays or other special occasions, invitation to join lay speakers' bureau or other public recognition.

**Source: Adapted from the NIDA Clinical Trials Network brochure
.Successfully Including Women in Clinical Trials..**

Improve communication

- Allow extra time to review the study's benefits and limits with options for one to one exchange of information.
 - Videotaped messages may be helpful in low literacy groups.
- Some women may be momentarily distracted by other competing demands such as children, to do lists, or other physical needs.
 - Extra time under these circumstances may allow for refocusing.

Source: Adapted from the NIDA Clinical Trials Network brochure .Successfully Including Women in Clinical Trials.

Improve communication

- Provide additional time and assistance to those participants with special needs e.g.,
 - parents with young children
 - older adults
 - persons with hearing and sight limitations
 - those with low literacy levels and participants for whom English is a second language, since they may require extra efforts to understand what is required of them

Source: Adapted from the NIDA Clinical Trials Network brochure .Successfully Including Women in Clinical Trials..

Address logistic and financial needs

- Maintain extended and flexible clinic hours. Weekend work may be required.
- Attempt to combine protocol visits with existing medical appointments.
- Offer childcare and transportation or reimburse patients for these services.
- Offer parents small gifts for their children. This may serve as an additional incentive and acknowledges parents' sacrifices and absence from childcare responsibilities.

Address logistic and financial needs

- Provide at-home or work site follow-up for participants
- Reimburse patients for their time.
 - Financial incentives may range from \$5.00 to \$25.00 per visit. Gift certificates and large cash lotteries may be popular with some groups.
- Explore potential of insurance coverage for ancillary care and other expenses associated with participation.
- For each research participant, maintain a list of alternate contacts to improve your options for staying in touch since some women and minority groups may be highly mobile.

Recruitment strategies

1. What mechanisms will you use to encourage recruitment?
2. Will you need different recruitment strategies tailored to different racial/ethnic populations?
3. Do you have a Public Affairs or Media Relations Department at your university that can help promote the study to your local media and community?
4. Does this department have connections to the communities chosen for the study?

Recruitment strategies

1. Do you have a detailed and piloted plan for community outreach?
2. How long does it take your IRB to review and approve advertising?
3. Do you have a dedicated telephone number and/or email address for potential participants to learn more about the study and a response system in place?
4. Have you determined conditions in the local community that might affect participant support of your project
 - e.g. the effects of numerous studies and over-sampling, or community activists seeking to influence research projects

Recruitment tools

- Radio ads
- Newspaper ads
- Flyers
- Newsletter articles
- FAQ sheets
- Web sites
- Public service announcements
- Press releases
- Letters to the editor
- Interviews on TV, radio, etc.
- Samples of these recruitment tools are available on some NIH websites e.g. NIMH Office of Communications:
<http://www.nimh.nih.gov/oc/index.cfm>

Suggestions

- Match the recruitment tool to the target audience (potential participant vs. caregiver vs. community referral source) and conduct pilot tests.
- Make sure all staff who communicate with potential participants receive proper training.
- Enter information about your clinical trial on ClinicalTrials.gov. See the corresponding NIH web site on clinical research resources

Retention Strategies

- How will you retain participants?
- How will you monitor retention?

Suggestions

- Communicate your long-term commitment to the individual and community.
- Clearly explain to participants the requirements of the study.
 - For example, “I will need you to see you again one year from now. What is the best way for me to contact you?”
- Be flexible when scheduling appointments.
- Obtain several phone numbers (home, work, cell) for participants so that you can follow up with them easily.
- Send participants small tokens of appreciation that will remind them of the study: birthday cards, refrigerator magnets, pens, etc.

Suggestions

- Send out newsletters that report the progress of the study.
- Provide services for the participant separate from the research study.
- Report research results in formats most useful to the different communities involved, such as participants, their families, and referring practitioners.
 - For participants, explain how the findings may ultimately improve their health.
 - To accommodate the busy schedules of health care practitioners, provide a handout that summarizes the findings more succinctly than a journal publication.

Diversity

1. Do you have realistic recruitment and retention strategies for all populations, especially those with diverse ethnic, racial, and socioeconomic groups?
2. Do you have an adequate mix of ethnic, racial, and economic diversity in your community from which to recruit participants?
3. How do you plan to recruit different racial/ethnic populations?
4. Do the backgrounds of senior study staff reflect the diversity of the communities that you wish to engage for participation in the study?

Diversity

1. Are you training your staff to be sensitive to cultural, racial, and ethnic differences?
2. Are you aware that some communities are mistrustful of medical research?
 - How do you plan to address these concerns?
3. Will your research team work with peers who are knowledgeable about the community?
4. Are you planning to work with organizations that interact or advocate for diverse populations?

Suggestions

- Research staff should reflect the diversity of the groups desired for enrollment.
- For example, staff should represent diversity of racial ethnic background, language proficiency, and cultural knowledge, in addition to diversity of scientific discipline and research experience.
- Establish relationships with respected members of the communities chosen for inclusion.

Suggestions

- Work with a representative/liaison of specific communities to obtain ideas for enhancing communication.
- Work with local churches, community centers, Spanish radio stations, etc.
- Offer all study materials in relevant languages.

Staff

1. How do you plan to train your staff to perform the study protocol?
2. How will you train staff to assume greater responsibility/independence?
3. How will you replace key staff, if other staff members are not sufficiently experienced and/or trained to assume those responsibilities?
4. How will you maintain "staff balance" for this study/trial (i.e. assigning staff among various trials)?

Suggestions

- Staff training directly impacts recruitment and retention.
- Because of the lengthy commitment to complete a clinical study, there will likely be turnover in staff.
- Plan for ongoing training for the replacement staff as well as refresher training for all staff.

Staff your team right

- Women and minority investigators and educators can often foster greater trust among female and minority participants.
- Include women and members of minority groups on your research staff, particularly those with the same ethnic or racial background as the target population.
- This strategy may not provide immunity to problems of distrust and fear but should lessen the severity of the problem.

Staff your team right

- All staff should be instructed to ask how the participant would like to be addressed (Mr., Mrs. first name or nickname).
- The participant's response should be noted in the research record. Staff turnover may mandate that this step be repeated.
- Address older adults more formally than younger participants.
- Provide pictures of staff in the research setting and include staff pictures in newsletters to facilitate identity and relationships among staff and participants.

Multi-site considerations

- What is the maximum number of participants that your site has the capacity to screen, enroll, and follow up with at the same time?
- Have you chosen sites that can access the target populations and have a realistic likelihood of recruitment success?
- How will you train and certify staff at all clinical sites? • How will you ensure that your sites will adhere to a common protocol?

Multi-site considerations

- Are there plans for ensuring and monitoring fidelity to the protocol?
- Do you have plans for “backup” sites, should they become necessary?
- Have you considered the impact of potential unbalanced enrollment across sites?
- Have you specified conditions under which a site may be terminated?

THE END

Considerations

- Multiple sites are used because the topic being studied requires a large and diverse sample size that is beyond what one site can achieve alone.
 - However, many sites fail to enroll their target sample sizes, leaving the total sample inadequate.
- As a study progresses, sites tend to fall into the categories of strong and weak enrollers. As enrollment goals slip behind, study leaders often decide to allow the strong enrollers to “over-recruit” in order to meet the overall sample size goal. However, because part of the site selection involves balance of geography, type of clinic, and racial/ethnic diversity, the post-design imbalance in enrollment across sites often impacts statistical analysis in a manner rarely considered.

Coordinating center for multi-site studies

- Does the coordinating center(s) have expertise in multi-site leadership?
- Do the coordinating center leaders have a clear mandate from site investigators?
- Have the leaders demonstrated a capacity to make decisions and keep the project moving forward?
- Does the coordinating center senior research team have the ability to assess and advise in matters concerning racial and ethnic diversity?

Coordinating center for multi-site studies

- Have you outlined the organizational structure (e.g. committees) of the coordinating center?
- Has the administrative structure and function been clearly defined?
- Do you have processes for resolving disputes and disagreements?

Considerations

- Problems may arise when the coordinating center is located at one of the participating data collection sites. The coordinating center must ensure a clear line of responsibility, confidentiality of data, and a strong firewall to prevent cross-talk.
- The study leader must have a clear mandate from colleagues to assume a position of authority. The leader must have the experience and confidence to be able to consider all points of view and to make a decision in spite of disagreement.
- During study implementation, the coordinating investigators need to review data without allowing their knowledge to influence decision-making at a site level.
- Conflict may arise if a clinical site is under-recruiting, and the site is also the coordinating center.

Sample Size

- Is the design flexible enough to permit enrollment of a diverse sample?
- Are the inclusion criteria too narrow, such that you will have unusual difficulty finding people who qualify for the study?

Considerations

- Strict inclusion criteria restrict the eligible number of participants and increases the amount of time and resources dedicated to screening.
- Studies may require that people are screened at successive stages, requiring significant time and expenditure of resources on subjects who never enter the study.

Institutional Review Board (IRB) and Data & Safety Monitoring

- Are the risks to participants minimized as much as possible through sound research design and the use of safety-focused procedures?
- Are participants selected fairly?
- Is a plan in place for seeking and documenting participants' informed consent? Are consent documents culturally and developmentally appropriate for all study populations?

Institutional Review Board (IRB) and Data & Safety Monitoring

- Is the informed consent document both legally and ethically sound?
- Have provisions been made for monitoring the data collected to ensure the safety of participants as the trial progresses?
- Have provisions been made to protect the privacy of participants and the confidentiality of data collected during the study?

Considerations

- IRBs consist of people who are qualified to evaluate new and ongoing clinical studies on the basis of scientific, legal, and ethical merit.
- The IRB determines whether the risks involved in a study are reasonable with respect to the potential benefits.
- The IRB has the authority to approve, require modification, or disapprove of research to ensure protection of human subjects.

Considerations

- IRBs monitor the ongoing progress of a study, from beginning to end.
- Most institutions that carry out clinical studies have their own IRBs. • Failure to obtain IRB approval will delay the progression of a study.
- All institutions carrying out a NIH funded intervention study must establish a data monitoring system commensurate with the risks, complexity, and nature of the trial.

Pilot studies

- Have you piloted all relevant aspects of the methodology including recruitment, screening, assessment, randomization procedures (if required), treatment and experimental methods, data entry, etc.?
- Has retention of participants been achieved for pilot studies?
 - For how long?

Considerations

- Complex designs are often needed to answer important questions that cannot be addressed with simple designs, but pilot studies may be required to develop an achievable recruitment plan.

When the study has been completed

- How will you thank participants?
- How will you disseminate the research results to all communities involved?
- How will you maintain the relationships that you have forged with the communities?

Suggestions

- Send thank you notes to participants and other communities that were involved in the study.
- Report research results in formats most useful to the different communities involved, such as participants, families of participants, and referring practitioners.
 - For participants, explain how the findings may ultimately improve their health. To accommodate the busy schedules of health care practitioners, provide a handout that summarizes the findings more succinctly than a journal publication.

Suggestions

- Maintain contact with your established community-based research advisory board and other community representatives/liaisons.
- Establishing and maintaining positive relationships with your community may facilitate your future research studies, as well as the studies of your colleagues.